

04-NOV-09  
10:22:48

GEORGIA DEPARTMENT OF TRANSPORTATION  
PRECONSTRUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN  
LIVE LOAD CASE PROGRAM  
REVISED: JUNE 26, 2008

PROB. NO. LL01

36.00' CURB-TO-CURB; 5 BEAMS; 120.00' AVERAGE SPAN

| BRIDGE WIDTH | X1    | X2    | CENTER LINE DISTANCE | # OF BEAMS | REACTION FORCE | MAXIMUM # OF TRUCKS | # OF COLUMNS | COLUMN WIDTH | SKEW ANGLE |
|--------------|-------|-------|----------------------|------------|----------------|---------------------|--------------|--------------|------------|
| 39.250       | 3.625 | 3.625 | 19.625               | 5          | 62.071         | 3                   | 1            | 8.000        | 0          |

  

| D1    | D2    | D3    | D4    | D5    | D6 | D7 | D8 | D9 | D10 | D11 | D12 | D13 | D14 | D15 | D16 | D17 | D18 | D19 | D20 |
|-------|-------|-------|-------|-------|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 3.625 | 8.000 | 8.000 | 8.000 | 8.000 |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |

  

| XCOL1  | XCOL2 | XCOL3 | XCOL4 | XCOL5 |
|--------|-------|-------|-------|-------|
| 19.625 |       |       |       |       |

LIVE LOAD CASE # 1 1 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD |
|------|----------------|--------|
| 1    | 1.2500         | 77.589 |
| 2    | 0.7500         | 46.553 |
| 3    | 0.0000         | 0.000  |
| 4    | 0.0000         | 0.000  |
| 5    | 0.0000         | 0.000  |

LIVE LOAD CASE # 2 2 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD |
|------|----------------|--------|
| 1    | 1.2500         | 77.589 |
| 2    | 1.5000         | 93.106 |
| 3    | 1.2500         | 77.589 |
| 4    | 0.0000         | 0.000  |
| 5    | 0.0000         | 0.000  |

LIVE LOAD CASE # 3 3 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD  |
|------|----------------|---------|
| 1    | 1.2500         | 77.589  |
| 2    | 1.5000         | 93.106  |
| 3    | 1.7500         | 108.624 |
| 4    | 1.2500         | 77.589  |
| 5    | 0.2500         | 15.518  |

LIVE LOAD CASE # 4 1 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD |
|------|----------------|--------|
| 1    | 0.0000         | 0.000  |

|   |        |        |
|---|--------|--------|
| 2 | 0.0000 | 0.000  |
| 3 | 0.0000 | 0.000  |
| 4 | 0.7500 | 46.553 |
| 5 | 1.2500 | 77.589 |

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LIVE LOAD CASE # 5                    2 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD |
|------|----------------|--------|
| 1    | 0.0000         | 0.000  |
| 2    | 0.0000         | 0.000  |
| 3    | 1.2500         | 77.589 |
| 4    | 1.5000         | 93.106 |
| 5    | 1.2500         | 77.589 |

LIVE LOAD CASE # 6                    3 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD  |
|------|----------------|---------|
| 1    | 0.2500         | 15.518  |
| 2    | 1.2500         | 77.589  |
| 3    | 1.7500         | 108.624 |
| 4    | 1.5000         | 93.106  |
| 5    | 1.2500         | 77.589  |

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LIVE LOAD CASE # 7                    1 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD |
|------|----------------|--------|
| 1    | 0.0000         | 0.000  |
| 2    | 0.3750         | 23.277 |
| 3    | 1.2500         | 77.589 |
| 4    | 0.3750         | 23.277 |
| 5    | 0.0000         | 0.000  |

LIVE LOAD CASE # 8                    2 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD  |
|------|----------------|---------|
| 1    | 0.6250         | 38.794  |
| 2    | 1.6250         | 100.865 |
| 3    | 1.3750         | 85.348  |
| 4    | 0.3750         | 23.277  |
| 5    | 0.0000         | 0.000   |

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LIVE LOAD CASE # 9                    3 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD  |
|------|----------------|---------|
| 1    | 0.6250         | 38.794  |
| 2    | 1.6250         | 100.865 |
| 3    | 1.5000         | 93.106  |
| 4    | 1.6250         | 100.865 |
| 5    | 0.6250         | 38.794  |

LIVE LOAD CASE # 10                      2 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD |
|------|----------------|--------|
| 1    | 0.0000         | 0.000  |
| 2    | 1.2500         | 77.589 |
| 3    | 1.5000         | 93.106 |
| 4    | 1.2500         | 77.589 |
| 5    | 0.0000         | 0.000  |

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LIVE LOAD CASE # 11                      2 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD |
|------|----------------|--------|
| 1    | 1.2500         | 77.589 |
| 2    | 0.7500         | 46.553 |
| 3    | 0.0000         | 0.000  |
| 4    | 0.7500         | 46.553 |
| 5    | 1.2500         | 77.589 |

LIVE LOAD CASE # 12                      3 TRUCKS

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| BEAM | WHEEL FRACTION | P-LOAD |
|------|----------------|--------|
| 1    | 1.2500         | 77.589 |
| 2    | 1.5000         | 93.106 |
| 3    | 1.2500         | 77.589 |
| 4    | 0.7500         | 46.553 |
| 5    | 1.2500         | 77.589 |

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GEORGIA DEPARTMENT OF TRANSPORTATION  
PRECONSTRUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN  
SUMMARY OF THE LIVE LOAD CASE PROGRAM  
REVISED: JUNE 26, 2008

PROB. NO. LL01

36.00' CURB-TO-CURB; 5 BEAMS; 120.00' AVERAGE SPAN

| BRIDGE WIDTH | X1    | X2    | CENTER LINE DISTANCE | # OF BEAMS | REACTION FORCE | MAXIMUM # OF TRUCKS | # OF COLUMNS | COLUMN WIDTH | SKEW ANGLE |     |     |     |     |     |     |     |     |     |     |
|--------------|-------|-------|----------------------|------------|----------------|---------------------|--------------|--------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 39.250       | 3.625 | 3.625 | 19.625               | 5          | 62.071         | 3                   | 1            | 8.000        | 0          |     |     |     |     |     |     |     |     |     |     |
| D1           | D2    | D3    | D4                   | D5         | D6             | D7                  | D8           | D9           | D10        | D11 | D12 | D13 | D14 | D15 | D16 | D17 | D18 | D19 | D20 |
| 3.625        | 8.000 | 8.000 | 8.000                | 8.000      |                |                     |              |              |            |     |     |     |     |     |     |     |     |     |     |
| XCOL1        | XCOL2 | XCOL3 | XCOL4                | XCOL5      |                |                     |              |              |            |     |     |     |     |     |     |     |     |     |     |
| 19.625       |       |       |                      |            |                |                     |              |              |            |     |     |     |     |     |     |     |     |     |     |

| NO. OF TRUCKS | BEAM 1 | BEAM 2 | BEAM 3 | BEAM 4 | BEAM 5 | BEAM 6 | BEAM 7 | BEAM 8 | BEAM 9 | BEAM 10 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| LL CASE 1     | 1      | 77.589 | 46.553 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000   |
| LL CASE 2     | 2      | 77.589 | 93.106 | 77.589 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000   |

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|         |    |   |        |         |         |         |        |       |       |       |       |       |
|---------|----|---|--------|---------|---------|---------|--------|-------|-------|-------|-------|-------|
| LL CASE | 3  | 3 | 77.589 | 93.106  | 108.624 | 77.589  | 15.518 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LL CASE | 4  | 1 | 0.000  | 0.000   | 0.000   | 46.553  | 77.589 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LL CASE | 5  | 2 | 0.000  | 0.000   | 77.589  | 93.106  | 77.589 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LL CASE | 6  | 3 | 15.518 | 77.589  | 108.624 | 93.106  | 77.589 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LL CASE | 7  | 1 | 0.000  | 23.277  | 77.589  | 23.277  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LL CASE | 8  | 2 | 38.794 | 100.865 | 85.348  | 23.277  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LL CASE | 9  | 3 | 38.794 | 100.865 | 93.106  | 100.865 | 38.794 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LL CASE | 10 | 2 | 0.000  | 77.589  | 93.106  | 77.589  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LL CASE | 11 | 2 | 77.589 | 46.553  | 0.000   | 46.553  | 77.589 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LL CASE | 12 | 3 | 77.589 | 93.106  | 77.589  | 46.553  | 77.589 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

FOR PIER PROGRAM INPUT

|        |   |       |       |        |         |       |         |       |       |
|--------|---|-------|-------|--------|---------|-------|---------|-------|-------|
| 61LL   | 1 | 1     | 77588 | 46553  | 0       | 0     | 0       | 0     | 0     |
| 61LL   | 2 | 2     | 77588 | 93106  | 0       | 77588 | 0       | 0     | 0     |
| 61LL   | 3 | 3     | 77588 | 93106  | 0108624 | 0     | 77588   | 15517 | 0     |
| 61LL   | 4 | 1     | 0     | 0      | 0       | 0     | 46553   | 77588 | 0     |
| 61LL   | 5 | 2     | 0     | 0      | 0       | 77588 | 0       | 93106 | 77588 |
| 61LL   | 6 | 3     | 15517 | 77588  | 0108624 | 0     | 93106   | 77588 | 0     |
| 61LL   | 7 | 1     | 0     | 23276  | 0       | 77588 | 0       | 23276 | 0     |
| 61LL   | 8 | 2     | 38794 | 100865 | 0       | 85347 | 0       | 23276 | 0     |
| 61LL   | 9 | 3     | 38794 | 100865 | 0       | 93106 | 0100865 | 38794 | 0     |
| 61LL10 | 2 | 0     | 77588 | 0      | 0       | 93106 | 0       | 77588 | 0     |
| 61LL11 | 2 | 77588 | 46553 | 0      | 0       | 0     | 46553   | 77588 | 0     |
| 61LL12 | 3 | 77588 | 93106 | 0      | 77588   | 0     | 46553   | 77588 | 0     |